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ABSTRACT

The Story Maker is a teaching device that allows children to create stories by choosing options from a set of already-written story segments. This device (1) provides an active language experience that allows children to construct stories easily: (2) demonstrates the consequences of choosing different ways for a story to proceed: (3) avoids the overemphasis on low-level characteristics of text such as spelling and handwriting: (4) provides a real audience for children's compositions: (5) creates a natural context for comparing and discussing stories with different high-level characteristics: (6) provides a social and cognitive context in which it is natural for children to work together on language activities: and (7) provides a motivating, nonthreatening, success-oriented context for language activities. The choices are structured so that the initial choices a child makes constrain choices that can be made later in the process. The Story Maker is implemented in such a way that the child cannot see a given set of alternatives until the time has come to choose among them. After children have had some experience with this technique, they can construct their own Story Makers. (HOD)

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An Educational Technique to Encourage Practice With High-Level Aspects of Texts *

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This paper describes a set of classroom devices called the Story Maker. At first glance they appear to be directed solely toward the teaching of writing. Yet they grew out of a concern for teaching reading comprehension and our growing realization that both reading and writing are best taught when they are regarded as inseparable -- as the two necessary components of written communication. As we explored the devices we will describe here, it became clear that it is possible to design methods which serve to re-unite reading and writing in the classroom, where they have been to a large extent artificially separated. Children using the Story Maker are actually creating stories which are clearly meant to be read and discussed by classmates -- and are therefore practicing writing -- but they are simultaneously reading stories which someone else has written and therefore having to contend with unfamiliar words, events and plot structures.

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The original motivation for the development of these devices was our desire to translate some fundamental perspectives on text into classroom tools. Our approach then tries in several ways to provide a context in which children see and experience reading and writing as two closely-related facets of communication, rather than as subjects relegated to non-overlapping time periods in school.

We have used the phrase "conceptual readability" to designate an approach to textual analysis which focuses on high-level text characteristics such as the role of examples in an explanation, the communication of characters' plans in a story and the global structure of arguments. The emphasis on the word conceptual contrasts this view of text with the more traditional focus of readability formulas on syllables per word and words per sentence. This perspective suggests some clear directions for research on reading and writing, leading us to develop formalisms for describing different text structures and to investigate the impact of their characteristics on comprehensibility. However, the implications of such an attitude toward text for classroom teaching are less clear. Given a belief that high-level characteristics of text are central to readability and that an awareness of them is a crucial component of comprehension, how do we help children in classroom settings focus on these aspects of the texts they read and write? What kinds of classroom situations can we create which draw children's attention away from individual words or sentences to an appreciation of the organization of expository text or the working through of a confrontation in a story?

This paper will describe, first, the general educational guidelines which derive from our framework, and then, a group of related classroom devices which embody the "conceptual readability" perspective in practical tools. We see these more general goals as important for any educational method designed to encourage children to focus on high-level aspects of text in both reading and writing.

Educational Goals

Our emphasis on high-level aspects of text leads us to adopt a set of specific educational choices which help direct children's attention toward these crucial text characteristics.

1. Provide an active language experience which allows children to construct stories easily. The key word in this sentence is "active"; most reading experiences require little overt action from students other than to answer comprehension questions at the end of the selection. The combination of reading and writing in a single experience allows children to be involved in and captured by the activity and to have in the end a story they have produced in a much shorter time than it would usually take them to write one.

2. Demonstrate to children the consequences of choosing different ways for a story to proceed. Reading has been described as a process of formulating and evaluating hypotheses (Smith, 1973); in recent work, writing has been seen as involving a series of choices which satisfy constraints imposed by the task (Collins and Gentner, 1979). In both cases, decisions made early in the process significantly limit

available options later. An educational method should demonstrate this interdependence to children, rather than simply stating it in words.

3. Avoid the pitfall of overemphasis on low-level characteristics of text such as spelling and handwriting. Several researchers have pointed out the complex cognitive processes involved in reading (Perfetti, 1975) and writing (Flower and Hayes, in press; Scardamalia, Bereiter & McDonald, submitted for publication; Wason, 1970). Collins and Gentner (1979) have noted children's tendency to "downslide" into concentrating on lower-level processes such as decoding (in reading) or spelling and handwriting (in writing) when the task becomes too complex (see also Luria, 1929). Our goal is to construct an educational method which frees children's attention from these details so they can concentrate on higher-level aspects of the text.

4. Provide a real audience for children's compositions. New research and teaching techniques in writing emphasize the importance of children's awareness of the audience to whom they are writing and the use of a real audience to provide feedback to young writers (Bruce, Collins, Rubin and Gentner, 1978; Scardamalia, in press; Van Nostrand, 1977). Yet most of the compositions children produce are written to elicit good grades and comments from the teacher, rather than to communicate. Techniques are needed which naturally provide an audience for children in school.

5. Create a natural context for comparing and discussing stories with different high-level characteristics. Comparing and contrasting objects which share some but not all attributes is a central strategy for learning; this point has been made by researchers investigating cognitive processes in general (Gentner, 1977; Moore and Newell, 1973) and incorporated into language arts curricula (e.g. Moffett, 1976). While children can always be asked specifically to discuss the similarities and differences among several stories, our goal is to create an activity where the motivation for the comparisons grows out of the task itself.

6. Provide a social and cognitive context in which it is natural for children to work together on language activities. Recent studies by anthropologists and ethnomethodologists have pinpointed the importance of social organization and interaction in classrooms (McDermott, 1979; Cole, Hood and McDermott, 1978). Children writing in school, however, often work in isolation, rarely interacting even with the teacher (Rubin, 1980). School situations must be modified to encourage students to interact productively in the context of reading and writing activities.

7. Provide a motivating, non-threatening, success-oriented context for language activities. While this goal is hardly innovative or unique, it is certainly more difficult to achieve these aspects of educational activities than to describe them. Attention to motivational aspects of classroom activities is crucial to their success.

The devices we have developed attempt to address all of the above goals. Although there are a large number of language activities which derive from these tools (see Rubin, 1980 for more details), we will focus on only two of the basic ones here and explain how they relate to the general points we have listed.

The Story Maker

The most basic device we will describe is called a Story Maker. It is essentially a tool which allows children to create stories by choosing options from a set of already-written story segments. After making a series of choices, a child has a completed story which he or she can read, copy, illustrate and show to parents and friends. These choices are structured as a tree - that is, initial choices a child makes constrain choices he or she can make later in the process.

The beginning of a story tree in Figure 1 illustrates the basic structure of a Story Maker activity. The tree is made up of a group of stories about a Haunted House; each story segment is contained in a box. Each story begins with "Lace opened the front door and..." and one possible story a child might construct within this story tree would start out

> Lace opened the front door and slipped into what looked like a bowl of spaghetti. Frankenstein was cooking it for his dinner.

In the most elementary process of constructing a story from the tree, a child is actively involved in a reading and writing experience which quickly yields a complete story; thus this activity fulfills goal #1, that of providing an active experience.

We have implemented the Story Maker so that a child cannot see a given set of alternatives until the time has come to choose among them. Thus, a child is sometimes surprised at the consequences of his or her choice. A child choosing among the first three choices in this tree, for example, would have no idea what story segments followed along any of the branches. Thus, choosing a path through a story tree gives children some awareness of the consequences of their choices. On initial experiences with a given tree, they're often surprised; when they know the tree better, they can make more informed choices. We can encourage children to focus more explicitly on the interdependence of their choices by superimposing story characteristic goals on their process of putting together a story. For example, we have asked children to try to write funny, confusing, or boring stories - or stories in which the conflict between two characters remains unresolved. In the story tree in Figure 1, we have labeled the top-level branches of the tree as leading to funny stories, scary stories or stories involving television characters. Even in this simple tree, a child can make choices according to a goal which refers to global story characteristics; the technique thus addresses the second general goal of demonstrating the interrelatedness of story segments.

The Story Maker prevents both children and teachers from focusing attention on syntax, spelling or the like by guaranteeing that each and every story a child produces will be acceptable along these dimensions. Thus, the third goal is realized: downsliding is virtually eliminated. Because it requires simultaneous concentration

on fewer levels of the text, a child's task using the Story Maker is simpler than the job of writing a story from scratch. This was brought out in a recent pilot experiment. A 7-year-old girl created a "scary" Haunted House story using the Story Maker and then copied it. While she was transcribing the story, her attention was almost constantly drawn to the problem she has differentiating "b's" and "d's", but since the story itself was already determined, she could focus on her handwriting problem without sacrificing story content.

The Story Maker Maker

To illustrate a way of fulfilling the other four goals in our list, we will introduce an extension of the Story Maker idea -- a device called the Story Maker Maker. After children have had some experience with the basic Story Maker, they can construct their own Story Makers, deciding on the individual story parts and, perhaps, even the tree structure. Children working in groups can write story segments on index cards and then place them on hooks on a pegboard; branches can be indicated by pieces of yarn connecting the hooks. Multiple branches allow different children to see their own ideas of how the story should proceed included in the final product.

When the Story Maker is completed, another group of children can use it in the activities we have described above. This interaction achieves our fourth goal of providing a real audience for children's compositions. The Haunted House story tree partially shown in Figure 1, in fact, was written by a third-grader with the help of an adult tutor. The author, Michelle, knew that her best friend Lace would later be using the Story Maker and so included her as the main

character of the stories. The audience in such a situation may be quite expressive. Because their "reading" of the Story Maker requires active participation, a group of children provides considerable feedback to a Story Maker author.

When the children in Michelle and Lace's class used the Haunted House Story Maker to produce their own stories, the activity provided a means of addressing the fifth goal - the creation of a context for comparing stories with different high-level characteristics. Because they were all constructed from the same story tree, the stories were similar enough to invite comparison. Because each reflected an individual child's choices, they were different enough to force a contrast. The conversation around the classroom consisted mainly of comments such as, "Hey - mine has Lace and Frankenstein going to McDonald's too, but they don't get as much to eat!"

Goal #6, that of collaboration on a particular story, is facilitated by the actual physical layout of the Story Maker and Story Maker Maker. The size of the pegboard Story Maker Maker we have built (4 feet by 7 feet) almost necessitates participation by more than one child at a time. Thus a group writing experience develops in which children trade off as main author or designer. Children constructing a Story Maker together often enrich each other's ideas, suggesting new directions when the process bogs down. Thus, these activites provide natural ways for children to collaborate on group writing projects.

Finally, Story Maker activities appear in our experience so far to be highly motivating, satisfying goal #7. Because every story

produced using a Story Maker is correct in terms of spelling and syntax, a child is guaranteed at least partial success in this language activity. Children have shown marked persistence in working with the Story Maker. One seven-year-old girl who worked with the Haunted House Story Maker after school, writing and copying three different stories, then went home and wrote another story and song, and finally compiled them all into a Haunted House book.

Summary

Story Maker activities, therefore, are one way to fulfill the seven goals we have identified as central for guiding children towards high-level communicative aspects of writing and reading. Although these devices are still in the experimental stages of development, our initial experiences with them have been sufficiently positive that we believe they are worth pursuing. These tools - and others that concentrate on the educational issues raised by our seven goals - have the potential to positively affect classroom language experiences.

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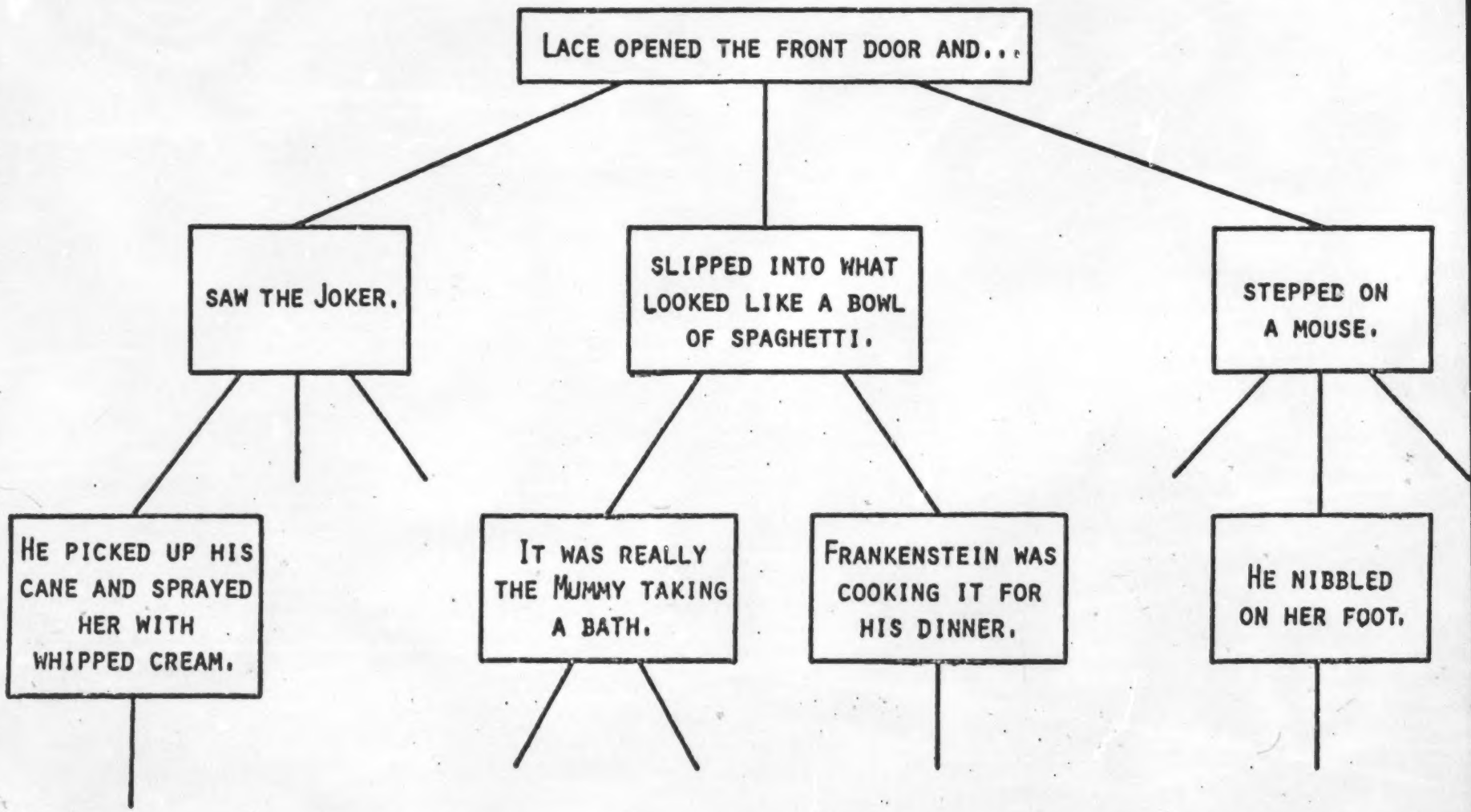
THE HAUNTED HOUSE
LACE OPENED THE FRONT DOOR AND...
SAW THE JOKER.
SLIPPED INTO WHAT LOOKED LIKE A BOWL OF SPAGHETTI.
STEPPED ON A MOUSE.
HE PICKED UP HIS CANE AND SPRAYED HER WITH WHIPPED CREAM.
IT WAS REALLY THE MUMMY TAKING A BATH.
FRANKENSTEIN WAS COOKING IT FOR HIS DINNER.
HE NIBBLED ON HER FOOT.

Figure 1. The beginning of a story tree.